

Louisiana Office of Public Health Laboratories	
Test Name	Somatic Cell Count
PHL Location	Amite/Shreveport Regional Labs
CPT Code	N/A
Synonyms	Electronic Somatic Cell Count, Direct Microscopic Somatic Cell Count
Brief Description of Test	Used for enumeration of somatic cells in raw milk
Possible Results	Number of somatic cell per ml
Reference Range	Raw cow milk: <100,000 est to 750,000/ml Raw goat milk: <100,000 to 1,500,000/ml
Specimen Type	Raw dairy milk and raw goat milk
Specimen Container(s):	Raw milk samples are collected in vials and submitted in sterile Whirl-Pak bags or sterile plastic vials normally used by industry.
Minimum volume accepted:	Raw milk: at least 40 ml
Collection Instructions	Collect a representative sample according to established protocol. In using the sterile Whirl-Pak or sterile vial there must be at least 0.5 to 1.0 inch air space. If using the Whirl-Pak bag secure closure so that the tabs are not twisted together.
Storage and Transport Instructions	Samples must be stored on wet ice, the ice cannot cover the sample top and there must not be any water over the top of the sample at anytime. The sample must be transport in a timely manner so that testing can be performed prior to 60 hours of collection if DMSCC and 72 hours if Electronic Cell Counter. Samples must be accompanied with a pilot sample of the same type and size for raw samples and at least ½ the size of the largest container for finished fluid products. The temperature pilot must be from 0.0-4.5C upon receipt.
Causes for Rejection	<ol style="list-style-type: none"> 1. Temperature of pilot samples out of acceptable range. 2. Time of receipt >60 hours from time of collection for DMSCC and >72 hours for Electronic Cell Counter 3. Sample container unprotected or under ice or water when received. 4. Sample frozen 5. Temperature control missing 6. Sample leakage

	<p>7. Unsatisfactory sample container</p> <p>8. Insufficient sample quantity</p>
Limitations of the Procedure	<p>A goat milk ran by Electronic Cell Counter with a result of >1,500,000 cells/ml must be confirmed by DMSCC.</p> <p>The level of experience and training directly influences final counts for DMSCC.</p>
Interfering Substances	<p>Electronic Cell Counter: The age and concentration of dye. The age, stress level, and length of lactation period for individual cows or goats. The seasons of the year.</p> <p>DMSCC: all of the above plus ghost or dead cells do not easily stain. High concentration of bacteria in the milk, clumping of somatic cells, and trash particles directly limit counting ability.</p>
References	<p>Standard Methods for the Examination of Dairy Products</p> <p>FDA 2400 Series for the Examination of Dairy Products</p> <p>US FDA/CFR Grade A Pasteurized Milk Ordinance</p> <p>Laboratory Milk and Dairy Products SOP Manual</p>
Additional Information	<p>A completed Lab 50 form must accompany the submission of samples. All information on the form must be completed and each sample identified per information on the form and the sample. A pilot must be submitted for each ice chest where there is multiple ice chests used. If there is a specific test for which the sample (s) are being submitted it must be noted on the form at submission time. All forms must include name of collector, date and time, temperature of milk when collected.</p>
Release Date	11/2013
<p>Warning: If you have printed a copy of this information please be advised that the Louisiana Office of Public Health Laboratories website and methods are updated on a regular basis. Please check the on-line version of this document to ensure you are relying on the most recent release.</p>	